UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

NORTHWEST BIOTHERAPEUTICS, INC., Plaintiff, - against- CANACCORD GENUITY LLC, CITADEL SECURITIES LLC, G1 EXECUTION SERVICES LLC, GTS SECURITIES LLC, INSTINET LLC, LIME TRADING CORP., and VIRTU AMERICAS LLC, Defendants.	Case No: 1:22-cv-10185-GHW-GS

PLAINTIFF'S LIMITED OBJECTION TO MAGISTRATE JUDGE STEIN'S REPORT AND RECOMMENDATION REGARDING THE ELEMENT OF LOSS CAUSATION

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Plaintiff Northwest Biotherapeutics, Inc. ("NWBO" or "Plaintiff") respectfully submits this limited objection to Magistrate Judge Stein's Report & Recommendation ("R&R") regarding the element of loss causation on Defendants' motion to dismiss Plaintiff's Amended Complaint (ECF 137).[1]

I. INTRODUCTION

This case arises from Defendants' illegal manipulation of NWBO's share price between December 5, 2017 and August 1, 2022 (the "Relevant Period"). As Magistrate Judge Stein held in a detailed 85-page R&R, the Complaint adequately alleges that throughout the Relevant Period, Defendants deliberately engaged in repeated manipulative spoofing of NWBO shares that interfered with the natural forces of supply and demand, driving NWBO's share price downward and causing NWBO to sell shares at depressed prices. (¶ 1.) By manipulating the market through their spoofing, Defendants caused Plaintiff to suffer significant losses: due to Defendants' spoofing, NWBO sold over 283 million shares at artificially depressed prices, including 49 million shares sold at the closing price on dates when Spoofing Episodes occurred. (¶11.)

Defendants moved to dismiss the Complaint and the R&R properly rejected all of Defendants' arguments that the Complaint failed to adequately plead manipulative acts, scienter, and reliance. The R&R correctly concluded that the Complaint "contains particularized factual allegations evincing all" of the indicia of spoofing that courts consider when distinguishing spoofing from legitimate market activity, and "amply support[s] the inference that Defendants' conduct affected the market price for NWBO stock." (R&R p. 33, 46.) It also properly concluded

[1] Citations to the Report & Recommendation are set forth as "R&R p. __." References to "¶ __" are to paragraphs of the Amended Complaint (ECF 95) (the "Complaint"). Unless otherwise indicated, emphasis is added, quotation marks and citations are omitted, and alterations are adopted.

that the Complaint adequately pled scienter in two independent ways – by sufficiently alleging "motive and opportunity" (R&R p. 54-59) and "conscious misbehavior or recklessness." (R&R p. 59-64.) And the R&R correctly concluded that the Complaint sufficiently alleged reliance through the fraud on the market doctrine. (R&R p. 79-84.)

The R&R recommends that the Complaint be dismissed *solely* due to its conclusion that NWBO failed to adequately plead loss causation, but also that NWBO be granted leave to replead its loss causation allegations because doing so would not be futile. (R&R at 84.) If the District Court affirms the R&R, NWBO will amend its complaint in accordance with Judge Stein's recommendation. However, Plaintiff respectfully asserts that the Complaint already adequately meets Rule 8's "not [] heavy" burden necessary to plead loss causation. *DoubleLine Cap. LP v. Construtora Norberto Odebrecht, S.A.*, 413 F. Supp. 3d 187, 212 (S.D.N.Y. Sept. 23, 2019) (Woods, J.) (citing *Loreley Fin. (Jersey) No. 3 Ltd. v. Wells Fargo Sec., LLC*, 797 F.3d 160, 187 (2d Cir. 2015)). The R&R's loss causation conclusion was based on the Court's inability to locate an expert report cited to and quoted in the Complaint regarding the long-term economic impact of market manipulation (attached hereto as Exhibit A), and its mistaken conclusion that the Complaint did not "complete the circle of causation" by pleading "how the various stock sale prices were 'formulaically derived' from the closing prices on the days when Spoofing Episodes took place." *Compare* R&R at 71 *with* Cmplt. at 289. It also applies a legal standard at odds with *Gamma Traders – I LLC v. Merrill Lynch Commodities, Inc.*, 41 F. 4th 71 (2d Cir. 2022) ("*Gamma Traders*").

The Complaint alleges in detail how Defendants' spoofing scheme forced the Plaintiff to sell its stock at artificially depressed prices by directly linking Defendants' spoofing to the Plaintiff's sales of NWBO stock immediately thereafter. These allegations satisfy the two

independently sufficient ways to plead loss causation set forth in *Gamma Traders*: (1) that a plaintiff traded "so close in time to Defendants' spoofing" as to permit the court to "infer as a matter of common sense that the market prices were artificial" when plaintiff traded (the "temporal proximity" theory), or (2) a factual basis indicating that the effects of the spoof lasted for a protracted period so as to "justify an inference that the market price was still artificial" when plaintiff traded (the "long-term price impact" theory). *Id.* at 80-81.

The Complaint pleads in detail that NWBO sold over 283 million shares of its stock in hundreds of distinct transactions during the Relevant Period. (¶¶ 11, 288-89.) The Complaint included as Exhibit 2 an 11-page chart detailing the date, number of shares, price per share, and dollar volume for each of these sales transactions. (ECF 95-2.) It explains that more than 49 million shares were sold at prices "formulaically derived from the closing price on dates where Spoofing Episodes occurred" – *i.e.* in temporal proximity to Defendants' spoofing (¶ 289). And, that the remainder of the 283 million shares were also sold at "artificially depressed" prices (¶ 288) because Defendants' spoofing had "both a temporary and long-term adverse effect" on the price of NWBO's stock. (¶ 292; *see also* ¶ 60). Plaintiff's allegations thus make it "plausible-rather than merely speculative – that [NWBO's] own trades interacted with Defendant's transactions to [NWBO's] detriment." *Gamma Traders,* 41 F.4th at 79.

The R&R makes three errors in its analysis of the law and the factual allegations in the Complaint.

First, while the R&R correctly found that the Complaint adequately pled that NWBO's sales in transactions for which the sale price was derived from a closing price on days in which Defendants spoofed within one hour of market close satisfied the temporal proximity theory under *Gamma Traders* (R&R at 70), it incorrectly concluded that the Complaint did not sufficiently

explain the formula for *how* those sales prices were determined by closing prices. This conclusion is incorrect in two ways – Rule 8 does not require this level of detail, and in any event, the Complaint provides just that. (*See* ¶¶ 288-296.)

Second, the R&R concluded that the Complaint failed to adequately allege temporal proximity under *Gamma Traders* for sales that occurred at prices derived from the closing price on the same day, but more than one hour after, Defendants spoofed. This conclusion is also incorrect in two ways – *Gamma Traders* does not restrict temporal proximity to one hour, and the Complaint contains factual allegations sufficient to support price impact for sales that occurred after, but on the same day as, Defendants' spoofing.

Third, the R&R incorrectly concluded that the Complaint failed to adequately allege a long-term price impact under the second theory identified in *Gamma Traders*. To the contrary; the Complaint alleges in detail that the impact of Defendants' spoofing activity "extended beyond the specific spoofing cycle … because the market neither immediately nor fully rebounded from the manipulated prices once each of the Spoofing Episodes was completed." (¶ 293). The R&R appears to base its conclusion on an incomplete understanding of the Complaint's allegations and inability to locate certain academic literature cited and quoted in the Complaint, which provides ample support for the plausible inference that Defendants' spoofing negatively impacted the market price of NWBO over the Relevant Period – all that is required under Rule 8 at the motion to dismiss stage.

The R&R should be adopted as to its conclusions regarding manipulative acts, scienter, and reliance, and this Court should hold that the Complaint also adequately alleges loss causation. Accordingly, Defendants' motion to dismiss should be denied in its entirety.

II. STANDARD OF REVIEW

When reviewing an R&R, the District Court has full discretion to "accept, reject, or modify,

in whole or in part, the findings or recommendations made by the magistrate judge." 28 U.S.C. § 636(b)(1). For any dispositive matter, "any part of the magistrate judge's recommendation that has been properly objected to must be reviewed by the district judge *de novo*." *Artista Recs., LLC v. Doe 3*, 604 F.3d 110, 116 (2d Cir. 2010) (citing Fed. R. Civ. P. 72(b)).

In considering a motion to dismiss under Rule 12(b)(6), the Court must "accept[] all factual allegations in the complaint as true" and "draw[] all reasonable inferences in the plaintiff's favor." *Set Capital LLC v. Credit Suisse Group AG,* 996 F.3d 64*,* 75 a (2d Cir. 2021) (citation omitted). *See also In re Wells Fargo & Co. Sec. Litig.*, No. 20-cv-4494, 2021 WL 4482102, at *8 (S.D.N.Y. Sept. 30, 2021) (Woods, J.) (same). "Rule 12(b)(6) does not countenance . . . dismissals based on a judge's disbelief of a complaint's factual allegations." *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544 at 556 (2007).

III. PLAINTIFF ADEQUATELY ALLEGES LOSS CAUSATION

Loss causation "is the causal connection" between the alleged misconduct and plaintiff's economic harm. *Erica P. John Fund, Inc. v. Halliburton Co.*, 563 U.S. 804, 808 (2011). Under the "prevailing practice" in this District, loss causation need not be plead with particularity. *Sharette v. Credit Suisse Int'l.,* 127 F. Supp. 3d 60, at 80, 102-03 & n.12 (S.D.N.Y. Aug. 20, 2015). "A short and plain statement in accordance with Rule 8 of the Federal Rules of Civil Procedure is sufficient." *Id*. at 103. *See also Harrington Global Opportunity Fund, Ltd v. CIBC World Markets Corp.*, 585 F. Supp. 3d 405 at 419 (S.D.N.Y. 2022) ("A plaintiff's burden in alleging loss causation 'is not a heavy one.'") ("*Harrington I"*) (quoting *Loreley Fin. (Jersey) No. 3 Ltd. v. Wells Fargo Sec., LLC*, 797 F.3d 160, 187 (2d Cir. 2015)); *DoubleLine Capital LP*, 413 F. Supp. 3d at 212 (same). The allegations in the Complaint more than meet this standard.

In *Gamma Traders*, the Second Circuit set forth two independently sufficient ways in

which loss causation may be pled in a spoofing case.[2] Under the "temporal proximity" theory, a plaintiff may allege that it traded "so close in time to Defendants' spoofing" as to permit the court to "infer as a matter of common sense that the market prices were artificial" when plaintiff traded. Under the "long-term price impact" theory, a plaintiff may allege a factual basis indicating that the effects of the spoof lasted for a protracted period so as to "justify an inference that the market price was still artificial" when plaintiff traded. 41 F. 4th at 80-81. The Complaint satisfies both of these theories, as it alleges exactly how Defendants' manipulative spoofing allowed Defendants to manipulate and depress the price of NWBO stock and how, as a result of Defendants' spoofing, it was forced to sell stock at artificially depressed prices.

A. Plaintiff Adequately Alleges Temporal Proximity With Respect To Its Sales Of At Least 49 Million Shares

1. The Complaint Adequately Alleges A Formulaic Link Between Its Sale Prices And Defendants' Spoofing

Plaintiff alleges numerous instances in which it sold shares at prices that were artificially depressed by Defendants' spoofing: NWBO sold "more than 49 million shares . . . where the sale price was formulaically derived from the closing price on dates where Spoofing Episodes occurred, such that a decline in the price on that day caused a decline in the price at which Plaintiff sold shares of NWBO stock." (¶ 289.) It lays out in painstaking detail the (1) transaction date; (2) number of shares sold; (3) sale price; (4) pricing date; (5) number of spoofing episodes during that day; and (6) the average return to Spoofing Episodes for each of those 49 million shares. (*Id.*) And, it even details 30 instances in which Defendants spoofed *within an hour*, and in some

[2] *Gamma Traders* involved alleged violations of the Commodity Exchange Act ("CEA") and analyzed the timing of the alleged violative conduct relative to the plaintiff's trades in the context of the need to plead "actual damages" under the CEA, rather than the element of loss causation in securities fraud cases. *Gamma Traders*, 41 F.4th at 78.

instances, just seconds before a NWBO sale.[3] (*Id*. (as denoted by the asterisk)). The 30 instances comprise a total of approximately 10.9 million of the more than 49 million in shares encompassed by the loss causation chart in Paragraph 289.

The R&R correctly found that "Plaintiff's allegations regarding the 30 instances in its chart in which Spoofing Episodes occurred within an hour of the market's close are sufficient to plead loss causation under the temporal proximity theory outlined in *Gamma Traders*," and that "[t]hese allegations are far more specific than those in *Gamma Traders*, where plaintiff failed to plead *when* it traded its stock, leaving it unclear how much time elapsed between the spoofing and the plaintiff's trades." (R&R p.70). However, the R&R wrongly concluded that, "in order to proceed on a temporal proximity theory as to these 30 instances, Plaintiff must complete the circle of causation by pleading in an amended complaint a sufficient explanation as to *how* the various stock sale prices were 'formulaically derived' from the closing prices on the days when Spoofing Episodes took place." (R&R pp. 70-71.) Specifically, the R&R mistakenly stated that "[n]either in the FAC nor its opposition brief does Plaintiff explain what it means when it says that the 'sale price was formulaically derived from the closing price.'" (R&R p. 67.) It observed that "[i]t is possible that a formulaic connection exists between NWBO's stock sales and the closing price(s) on these temporally distant 'Pricing Date(s)' because (for example) the sale price was based on an average of NWBO's closing stock price on various dates. But in the absence of an explanation in the FAC, it is impossible to tell." *Id.*

The R&R's recommendation in this respect is incorrect in two ways – this level of

[3] *See* R&R p. 68 ("To be sure, NWBO's statement that, in these instances, Defendants spoofed "within an hour" of a NWBO sale cannot be taken literally; the chart shows that most of the 30 instances involve sales that took place days or weeks after (or, in some cases, *before*) the Spoofing Episodes in question. But to the extent NWBO represents that the sale price was determined based on the closing price on a day when there were Spoofing Episodes within an hour of the market's close at 4:00 p.m., the effect would be the same.")

specificity is not required by Rule 8, and in any event, the Complaint provides it.

Paragraph 289 of the Complaint alleges that "of Plaintiff's 283 million shares of stock sold during the Relevant Period, more than 49 million shares were sold by Plaintiff where the sale price was formulaically derived from the closing price on dates where Spoofing Episodes occurred, ***such that a decline in the price on that day caused a decline in the price at which Plaintiff sold shares of NWBO stock***." (¶ 289.) This is a *factual* allegation, ignored in the R&R, that must be accepted as true at the motion to dismiss stage, and that more than satisfies the liberal Rule 8 pleading standard.[4] Thus, the Complaint in fact provides exactly the type of explanation that the R&R found lacking.

While the Complaint does not reproduce the complete mathematical formula for each sale (which varies from sale to sale, so would require dozens of additional pages of allegations), it does specifically allege that this formula was monotonic[5] in the closing price for each date. That is, the sale price generated by each of these formulas ***always decreased*** if the closing price of NWBO stock decreased on the indicated pricing date. (¶ 289.) The R&R suggests that it would be sufficient to replead that the closing price was, for instance, the "average of closing prices on various dates," (R&R p. 67), but that is no different a level of specificity than the Complaint's current allegation that a decline in the price on that day mathematically caused a decline in the price at which Plaintiff sold shares of NWBO stock.

Furthermore, the Complaint goes even further, providing a specific example of *exactly* how the closing price on a given date impacted NWBO's sale price in a particular transaction.

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[4] The *factual* nature of this allegation is precisely of the type that must be accepted as true at the pleading stage, and can be clearly contrasted with *conclusory* allegations that do not deserve that presumption, such as "Plaintiff sold shares at prices impacted by Defendants' conduct."

[5] "Having the property either of never increasing or of never decreasing as the values of the independent variable of the subscripts of the terms increase." *Monotonic*, MERRIAM-WEBSTER (2022).

Specifically, in paragraph 290 (not cited in the R&R), the Complaint alleges that "on Sunday, December 12, 2021, Plaintiff sold 1.9 million shares at a price ***equal*** to the closing price of NWBO stock on Friday, December 10, 2021." That paragraph then provides further detail about the opening and closing prices of NWBO stock that day, as well as a comparison to the S&P 500 and the OTCQB indices, and pleads that there was no negative news about NWBO issued that day. The subsequent paragraph details the impact of Defendants' spoofing on that day, including that "[a]ll five Spoofing Episodes in NWBO's shares that day occurred in the final hour of trading" and continued until minutes prior to the market close. (¶ 291.)

It is difficult to envision any greater specificity regarding the relationship between the closing price on December 10, 2021, and the price at which NWBO sold shares on December 12, 2021, since the two prices are defined as mathematically equal to each other and have a one-to-one direct relationship. The sale on Sunday (a non-trading day) occurred at the closing price on Friday (the most recent trading day). This necessarily "complete(s) the circle of causation" (R&R p. 71) under any analysis and satisfies the pleading standard for loss causation.

2. The Complaint Adequately Alleges Temporal Proximity For NWBO's Sales That Occurred Less Than 6.5 Hours After Spoofing Episodes

In *Gamma Traders*, the Second Circuit held that "same-day, post-spoof trades" could justify "an inference of injury" if the complaint provides "factual allegations justifying an inference that the effects of the spoof linger" for that long. 41 F.4th at 80. While the *Gamma Traders* plaintiff did not do so, Plaintiff does so here.

In *Gamma Traders*, the plaintiff "never pleaded that it traded after Defendants spoofed on a particular day" or even that it traded "in close proximity to Defendants' spoofing." 41 F.4th at 77, 81. Rather, it alleged "conclusorily" via "rote probabilities" that "there must have been at least one trade – though it has no idea which one or when it may have occurred – in which it came out

on the net losing end of Defendants' market manipulation" and that it was "implausible as a matter of sheer probabilities that Defendants' spoofing activities never once affected the price at which Gamma traded." *Id.* at 78.

By contrast, Plaintiff here cites numerous specific examples in which it traded after, and in close proximity to, Defendants' spoofing, as well as "facts to support its theory about the length of time that spoofing affect[ed] the market or the timing of any of its trades in relation to the spoofs." *Id.* at 81-82. Indeed, exactly as prescribed by the Second Circuit in *Gamma Traders*, Plaintiff alleges how "its trades occurred so close in time to Defendants' spoofing as to permit [the Court] to infer as a matter of common sense that the market prices were artificial when [NWBO] traded." *Id*. at 80.

The R&R found that "[w]ith the exception of those 30 instances (which relate to 27 separate stock sales), the other NWBO sales [the 70 other stock sales in Plaintiff's loss causation chart (*see* ¶ 289)] are too remote in time from alleged Spoofing Episodes to plead "close proximity" under *Gamma Traders*," and that "[f]or most of these stock sales, the Spoofing Episodes took place in the morning, from four to more than six hours before the end of the trading day. This is too far removed from the corresponding sale to be considered 'close.'" (R&R p.71.)

However, the R&R also found that Plaintiff has alleged enough facts to support a *common-sense inference* that, with respect to the 10.9 million shares sold in the 30 asterisked instances, NWBO's stock price *remained artificially depressed at the close of trading* on the Pricing Dates in question. (R&R p.70-71.) The R&R offers no analysis or explanation of why this same "common-sense inference" disappeared at a bright-line cutoff of one hour (and would not last at least 6.5 hours, the length of a single trading day), a threshold not found in *Gamma Traders* or any

other loss causation decision of which Plaintiff is aware.[6] To the contrary; the Second Circuit in *Gamma Traders* assumed that such "same-day, post-spoof" sales could be sufficiently close enough in time to have been negatively impacted by Defendants' spoofing, and recognized, "the effects of spoofing pose questions of fact." 41 F.4th at 80. Determining the length of time Defendants' spoofing impacted the market price for NWBO will necessarily be the subject of hotly contested expert testimony and, as such, is inappropriate for determination at the motion to dismiss stage.

Furthermore, there is no economic justification, and certainly not before expert testimony, for a bright-line threshold of 60 minutes. There is no discontinuity that would justify different treatment for sales priced 59 minutes after a Spoofing Episode and those sales priced 61 minutes after a Spoofing Episode. Here, in addition to the 30 sales priced within one hour after Defendants' spoofing, the Complaint and Exhibit 1 describe 36 sale-spoof pairs in which the Defendants spoofed just 60 and 120 minutes before NWBO's sale(s) were priced, and another 41 sale-spoof pairs in which the Defendants spoofed just 120 and 180 minutes before NWBO's sales were priced. Plaintiff has thus adequately alleged loss causation for each of Plaintiff's sales that were priced at the closing prices for which Defendants spoofed within the same trading day (6.5 hours).

B. <u>The Complaint Also Adequately Alleges Long-Term Price Impact</u>

The Complaint also adequately alleges sufficient "facts to support its theory about the length of time that spoofing affect[ed] the market" for NWBO stock, sufficient to plead loss causation for those sales that occurred (or were priced) more than one day after Defendants' spoofing. *Gamma Traders*, 41 F.4th at 81-82.

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[6] In *LJM Partners, Ltd. v. Barclays Capital Inc.*, No. 19-CV-368, 2023 WL 6311471, at *16 (N.D. Ill Sept. 28, 2023), the court held that allegations that Defendants' conduct affected the price of a security "for the entire afternoon of February 5 and morning of February 6," during which time the plaintiff transacted, was sufficient under *Gamma Traders* to plead loss causation.

1. The Milgrom Report Quoted In The Complaint Supports A Long-Term Price Impact From Spoofing

The Complaint provides direct quotations and relevant conclusions from the expert report of Nobel Prize-winning economist Dr. Milgrom in *Alaska Electrical Pension Fund, et al. v. Bank of America, N.A., et al.*, No. 1:14-CV-7126 (S.D.N.Y.) to support its allegation that Defendants' spoofing affected the market for NWBO throughout the Relevant Period:

> The persistence of the price impact of manipulation is well-established in the market microstructure literature. As Nobel prize-winning economist Professor Paul Milgrom has explained: "Because manipulative trades are viewed by market participants as potentially informed, and potentially informed trades can result in permanent price impact, manipulative trades can lead to permanent price impact." Based on an extensive review of the literature, Dr. Milgrom gives two reasons for why market participants cannot readily identify manipulative trades: *First*, it is highly improbable that manipulative trades can immediately be identified as manipulative and uninformed by market participants. For any agent in the market, the incentive to gather private information – and thus to become an informed trader – is directly related to the volume of its trades and the size of its positions. The Defendants here are among the largest market participants and have powerful incentives to be well-informed. Other participants would likely expect this, and therefore have good reason to treat their trades as potentially informed. This tendency of large traders to be well informed is also observed by others in the market microstructure literature. *Second*, it is also improbable that the public will eventually come to know which trades were manipulative and uninformed. For all these reasons and others, Professor Milgrom concluded, "The market microstructure literature demonstrates clearly how potentially informed trades can result in permanent price impact." (¶ 60.)

The R&R did not consider the content of the Milgrom report because it could not locate it. *See* R&R p. 73 n.31 (stating that the report is not available on the docket and "the Court is unable to review it for itself"). For the Court's reference, attached as Exhibit A is the ECF-stamped full Milgrom report, which is available on PACER as ECF No. 557-7, Exhibit 7 to Declaration of Marc L. Greenwald in Support of Motion to Certify Class and Appointment of Class Counsel (filed Jan. 26, 2018).[7]

[7] Notably, the Milgrom report was submitted in *Alaska Electrical Pension Fund* by counsel for the

Addressing only the Complaint's paragraph discussing the Milgrom report, the R&R concludes that "nothing in the FAC suggests that the Milgrom report concerned spoofing," and from that reasoned that its conclusions are not applicable to the present case. (R&R p. 73-74.) Specifically, the R&R reasons that spoofing differs from other forms of market manipulation because spoofing schemes rely on "the execution of trades [i.e., Executing Purchases] that push the price in the other direction." (R&R p. 74.) The R&R distinguishes the Milgrom report because in the ISDAfix matter in which that report was submitted, "the profitability of the scheme did not depend on subsequent trading or a subsequent movement of the manipulated price in the opposite direction." (*Id.*) By contrast, the R&R concludes, it would be unreasonable to infer that "spoofed Baiting Orders continue to emit a false pricing signal to the market after they have been cancelled and the spoofer has purchased and resold the stock." (R&R p. 75.)

As the R&R acknowledges, because it did not review the Milgrom report, it was unable to evaluate the extensive economic evidence presented therein, which establishes the persistent price impact of manipulative spoofing. (R&R at p. 73 n. 31.) The Milgrom report does not mention price fixing or other factual allegations in or unique to the ISDAfix matter, but rather discusses the extensive economic literature establishing that the price impact of *any* form of trade-based manipulation (like spoofing) is not likely to fully reverse.

The Milgrom report also specifically addressed the concern in the R&R that unwinding a manipulative spoof through subsequent trading to realize profits would eliminate the permanent

plaintiffs, which included Quinn Emanuel, counsel for Defendant Citadel here. As such, even Defendants' counsel recognize that there is often a long-term price impact from market manipulation like that at issue here.

price impact of that manipulation:[8]

> ***There is, however, no symmetry in the manipulative trade and its unwinding.*** A manipulative trader who wants, for example, to raise a price will buy in a way that *maximizes* the price impact. However, when unwinding the trade, that same trader will seek to *minimize* the price impact to avoid losses. Therefore, the upward effect can be expected to exceed the downward effect from unwinding—***and that difference may represent a permanent effect***.[9]

The Complaint contains detailed factual allegations that show that Defendants engaged in ***asymmetric*** behavior that yielded an ***asymmetric*** price impact between manipulative Spoofing Episodes and the unwinding of that manipulation, just as described in the Milgrom Report. The

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[8] Milgrom Rpt. at 17 ("[A]fter a manipulative trade, the manipulative trader would be left with inventory to rebalance by "unwinding" the manipulation."). Spoofing episodes are a kind of "manipulative trade" notwithstanding the cancellation of Baiting Orders because Baiting Orders induce other market participants to sell shares at artificially depressed transaction prices. ¶¶ 74, 76, 87, 90, 101, 104, 115.

[9] *Id.* (emphasis added). A large economic literature shows that the price impact of order flow depends on the relative imbalance of supply and demand in the order book. *See, e.g.*, Rama Cont et al., *The Price Impact of Order Book Events*, 12 J. FIN. ECONOMETRICS 47 (2014) (future price changes are driven by the imbalance between supply and demand at the best bid and ask prices); Martin D. Gould & Julius Bonart, *Queue Imbalance as a One-Tick-Ahead Price Predictor in a Limit Order Book*, 2 MARKET MICROSTRUCTURE & LIQUIDITY 1650006 (2016) (buy-side imbalances predicts future price increases); Justin A. Sirignano, *Deep Learning for Limit Order Books*, 19 QUANT. FIN. 549 (2017) (neural networks trained on order flow deep in the limit order book predict future changes in the best bid and best ask price). Moreover, the academic literature on spoofing, ***including a paper cited in the R&R at p. 62***, also suggests that spoofing undermines long-run price accuracy. *See* Basil Williams & Andrzej Skrzypacz, *Spoofing in Equilibrium* (2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3742327. In this simplified theoretical model, there are three dates: date 1, which is the date where trades place and cancel Baiting Orders, date 2, where those traders place the opposite order, and date 3, where the terminal value of the asset is revealed. *Id.* at *4. Three-period models are often used as a simplified representation of continuously repeating trading that occurs in actual markets. *See, generally* STOCHASTIC CALCULUS FOR FINANCE I: THE BINOMIAL ASSET PRICING MODEL (2004). When comparing spoofing to a "benchmark equilibrium" with no spoofing, the authors conclude that "the average executed price at date 2 [i.e., the long-run price] in the spoofing equilibrium is further from the true asset value v than in the benchmark equilibrium." Williams & Skrzypacz, at *14. For this reason, "***trading histories*** involving canceled orders are less informative of the asset's value than under the benchmark." (emphasis added).

Complaint alleges that the total share volume of sell-side Baiting Orders exceeded the share volume of buy-side Executing Purchases by over 57%. ¶¶ 65, 67 (30.4 million shares of Baiting Orders to 19.3 million shares of Executing Purchases during Spoofing Episodes). And it alleges that the median share volume of new sell-side orders exceeded the median share volume of new buy-side orders placed during Spoofing Episodes. ¶ 82 (106% more); ¶ 96 (67% more); ¶ 138 (314% more); ¶ 199 (180% more) ¶ 226 (infinitely more, i.e., there were no new buy-side orders on median). These factual allegations, which were not addressed in the R&R, explain why the price impact of spoofed Baiting Orders was not fully unwound: the downward pressure applied by sell-side orders exceeded the upward pressure applied by buy-side orders. As Dr. Milgrom explains, this difference between the sell-side and buy-side pressure will yield a persistent and permanent price impact.[10]

2. The Complaint's Allegations Regarding Partial Reversion Of Spoofing Impacts Do Not Undermine Its Loss Causation Allegations

The R&R also concluded that the Complaint alleges a "reversion of the stock price in a brief period of time," which "undermines Plaintiff's speculative hypothesis that the spoofing had

[10] The R&R further states that the term "permanent price impact in the relevant finance literature appears to mean something very different from what Plaintiff suggests," and refers to certain studies which measured quote changes five minutes after a manipulative trade. But Dr. Milgrom was not using the term "permanent" to refer to five-minute price impacts. Rather, the Milgrom report used that term to discuss an expert report previously submitted by Dr. Craig Pirong, which described peer-reviewed literature that found the price impact of market manipulation lasted for ***more than one day***. Expert Report of Dr. Craig Pirong, *Alaska Electrical Pension Fund v. Bank of America*, No. 14 Civ. 7126 (JMF), ECF No. 503-4, Aug. 2, 2017, at *22 n. 14 ("Carole Comerton-Forde and Talis J. Putnins, *Measuring Closing Price Manipulation*, 20 J. of Financial Intermediation (2011) 135, present empirical evidence on the price effects of 184 manipulations of the closing prices on US and Canadian stock exchanges. During these manipulations, traders bought large quantities of stock shortly before the close. Comerton-Forde and Putnins find that (a) stock prices rose significantly at the close, and (b) ***the increases were only partially reversed the next day. The fact that the reversals were only partial indicates that the manipulations had a permanent effect on prices***.") (emphasis added).

a long-term or persistent price impact." (R&R p. 76.) However, the Complaint does not allege a *complete* reversion of the negative price impact of Defendants' spoofing, but instead alleges that any reversion was only partial and, therefore, that the long-term impact of Defendants' spoofing was to depress the price of NWBO shares.

Plaintiff alleges how Defendants' spoofing negatively impacted NWBO's share price long term. (¶¶ 293-295.) It is not contradictory to allege that Defendants profited from their spoofing conduct, and also that the spoofing caused persistent and long-lasting declines in NWBO share price. Just as decreases in a stock price following disclosure of a material misstatement in a Rule 10b-5(b) claim do not necessarily reflect the complete dissipation of price inflation, so also an increase in the price of NWBO shares that would have occurred even absent Defendants' spoofing does not unwind the deflationary effect of a Spoofing Episode which is "the difference between the fair value of all that the [plaintiff] received and the fair value of what he would have received had there been no fraudulent conduct." *Acticon AG v. China North East Petroleum Holdings Ltd.*, 692 F.3d 34 at 38. Defendants profited from short sales opened at a higher price prior to a Spoofing Episode, as well as from ordinary sales thereafter if the price partially reverts.

For example, the Complaint alleges that at 9:30:51am on February 1, 2021, Defendant GTS engaged in spoofing activity which drove down the price of NWBO shares from $1.59 to $1.56, allowing Defendant GTS to purchase shares of NWBO at a price of $1.56 per share. (¶¶ 179-184.) Shortly thereafter, at 11:04:58, Defendant GTS sold NWBO shares at a price of $1.57 per share, yielding a return of 1.282%. (¶ 185.) This purchase reflected only a ***partial reversion*** because the share price remained below the pre-spoof level of $1.59. Publicly available stock price data[11] confirm that NWBO's share price never exceeded $1.57, much less reached its pre-spoof level of

[11] In the R&R, the Court took judicial notice of NWBO stock prices contained in Exhibit 6 to Defendants' motion to dismiss. (R&R p. 27.)

$1.59 per share, at *any* point in time on February 1, 2021 after this Spoofing Episode.

As this example illustrates, the Complaint does not allege a *complete* price reversion within a short period of time. The Complaint alleges that Defendants *sometimes* sold shares of NWBO at a higher price after a Spoofing Episode than the prevailing price before the Spoofing Episode, realizing a profit. It does not follow that the price *fully* reverted and Plaintiff suffered no loss. Moreover, absent spoofing, the price of NWBO shares after a Spoofing Episode may have been even higher. For example, if the price of NWBO would have increased $0.10 after a Spoofing Episode but only increased $0.05, the reversion was only partial, notwithstanding the price increase.[12]

3. The Complaint Contains More Compelling Allegations On Long-Term Price Impact Than Those Held Sufficient In Other Spoofing Cases

The Complaint's allegations of long-term price impact are considerably more detailed and persuasive than those that were held to sufficiently allege loss causation in other spoofing cases, including most recently in *Harrington.*

The *Harrington* court credited on a motion to dismiss the plaintiff's allegation that "[when] spoofing events occur continuously throughout the day and continue without interruption for a protracted period of time, the price of a spoofed security will generally not fully recover to the price that existed prior to the spoofing events." *Harrington Global Opportunity Fund, Limited, v. CIBC World Markets Corp*., No. 21-CV-761, 2023 WL 6316252, (S.D.N.Y. Sept. 28, 2023) at *8 ("*Harrington II"*); *see also Harrington I*, 585 F. Supp. 3d at 419-20.

The R&R distinguishes *Harrington* because "the *Harrington* court did not analyze loss causation under the *Gamma Traders* framework, as *Gamma Traders* had not been decided at the

[12] An event study or similar expert analysis would be required to determine exactly how much of a price increase following a Spoofing Episode would have occurred even if there had been no fraudulent conduct.

time of *Harrington I* and was not cited in the parties' briefs in *Harrington II* on the loss causation issue…The issue of spoofing's long-term effects warranted little attention, because plaintiff alleged it sold the vast majority of its shares on days that spoofing episodes took place….Moreover, in *Harrington*, the price of the supposedly spoofed stock plummeted from $28.03 to $3.13 over the ten-month relevant period (*id.* ¶ 103), whereas here, as noted, NWBO's share price more than doubled over the Relevant Period." (R&R p.78.)

However, *Harrington's* analysis, in decisions issued both before and after *Gamma Traders* was decided, is consistent with current law and supports the sufficiency of Plaintiff's allegations here. *Gamma Traders* held that "the effects of spoofing pose questions of fact" that cannot be resolved on a motion to dismiss but also that federal pleading standards require a plaintiff "to allege *some* facts that support an inference of actual injury" (emphasis in original). This low bar was not satisfied by the *Gamma Traders* plaintiff's single conclusory allegation that "Defendants' manipulation of the markets … caused prices to be artificial throughout the Class Period," 41 F.4th at 80, but was met by the *Harrington* plaintiff's factual allegation that when "spoofing events occur continuously throughout the day and continue without interruption over a protracted period of time, the price of a spoofed security will generally not fully recover to the price that existed prior to" the spoofing events. *Harrington II*, at *8. Plaintiff does this and significantly more in the Complaint here. *See, e.g.,* ¶ 60 (Milgrom Report), ¶ 288 (NWBO sold over 283 million shares at prices artificially depressed by Defendants' manipulative spoofing over the Relevant Period); ¶ 289 (Spoofing Episodes occurred on nearly 400 days during the Relevant Period).

Harrington II is consistent with other spoofing decisions that found complaints presenting similar allegations to have satisfied Rule 8's liberal pleading standard for loss causation. *See Sharette*, 127 F. Supp. 3d at 103 (holding that the plaintiffs "pleaded enough facts evidencing a

link between the alleged manipulative scheme and their damages" because they "have shown in some detail exactly how the structure of the Offerings allowed investors to manipulate and depress the price of ECD stock" and "that following the Offerings, short sales of ECD stock skyrocketed while the price of ECD stock plummeted."); *In re Barclays Liquidity Cross & High Frequency Trading Litig.*, 390 F. Supp. 3d 432, 450 (S.D.N.Y. May 28, 2019) (holding that the plaintiffs plausibly alleged "that the Exchanges' alleged misconduct was *a* proximate cause of the economic loss they suffered by trading in the manipulated securities market"); *CP Stone Fort Holdings, LLC v. Doe(s)*, No. 1:16-cv-04991, at ECF 67 (N.D. Ill. Oct. 3, 2017) (holding that plaintiff adequately pled loss causation in a spoofing case where it provided defendant with "some indication of the loss.").

IV. <u>CONCLUSION</u>

For the foregoing limited reasons, Plaintiff respectfully objects to the R&R and submits that the Court should deny Defendants' Motion to Dismiss in its entirety.[13]

[13] Should the Court dismiss the Complaint, Plaintiff respectfully requests leave to amend and is fully prepared to, *inter alia*, add the factual allegations Magistrate Judge Stein requested. *See Chill v. Gen. Elect. Co.*, 101 F. 3d 236, 271 (2d Cir. 1996) ("In the securities litigation context, leave to amend is particularly appropriate[.]"); *In re Tufin Software Technologies Ltd. Sec. Litig*., No. 20-cv-5646, 2022 WL 596861, at *11 (S.D.N.Y. Feb. 25, 2022) (Woods, J.) (granting leave to amend for a second time); *Xu v. Gridsum Holding, Inc*., 2020 WL 1508748, at *9 (S.D.N.Y. Mar. 30, 2020) (same). In the Second Circuit, "[i]t is the usual practice upon granting a motion to dismiss to allow leave to replead." *In re Tufin*, at *11.

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Respectfully submitted,

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